In the Claims

Please cancel claims 6-20, 27, 30-36, and 39, without prejudice.

Please amend claims 1-5, 21-26, 28, 29, 38, and 40-42.

Please add claims 44-50.

Per 37 C.F.R. §1.121, the current status of all the claims in the present application is presented below.

Claim 1 (currently amended): An isolated protein comprising a polypeptide that is at least ~~80%~~95% identical to ~~a polypeptide selected from the group consisting of:~~

~~a) a polypeptide having the sequence of amino acid residue 1 to amino acid residue 65 of SEQ ID NO:2;~~

~~b) a polypeptide having the sequence of amino acid residue 19 to amino acid residue 65 of SEQ ID NO:2;~~

~~c) a polypeptide having the sequence of amino acid residue 21 to amino acid residue 65 of SEQ ID NO:2;~~

~~d) a polypeptide having the sequence of amino acid residue 1 to amino acid residue 67 of SEQ ID NO:10;~~

~~e) a polypeptide having the sequence of amino acid residue 21 to amino acid residue 67 of SEQ ID NO:10; and~~

~~f) a polypeptide having the sequence of~~ amino acid ~~residue~~residues 23 to ~~amino acid residue~~ 67 of ~~SEQ ID NO:2~~SEQ ID NO:10;

~~wherein said polypeptide has cysteine residues corresponding to amino acid residues 33, 40, 45, 55, 62 and 63 of SEQ ID NOs:2 or 10~~wherein the polypeptide has antimicrobial activity.

Claim 2 (currently amended): ~~An~~The isolated protein of ~~Claim~~claim 1~~,~~ wherein the amino acid percent identity is determined using a FASTA program with ktup=1, gap opening penalty=10, gap extension penalty=1, and substitution matrix=BLOSUM62, with other parameters set as default.

Claim 3 (currently amended): ~~An~~The isolated protein of ~~Claim~~claim 1~~,~~ wherein ~~said protein comprises a~~ the polypeptide ~~having~~comprises ~~the sequence selected from the group consisting of:~~

~~a) a polypeptide having the sequence of amino acid residue 1 to amino acid residue 67 of SEQ ID NO:10;~~

~~b) a polypeptide having the sequence of amino acid residue 21 to amino acid residue 67 of SEQ ID NO:10; and~~

~~c) a polypeptide having the sequence of~~ amino acid ~~residue~~residues 23 to ~~amino acid residue~~ 67 of SEQ ID NO:10.

Claim 4 (currently amended): ~~A~~An isolated polypeptide selected from the group consisting of:

a) amino acid residue 30 to amino acid residue 63 of SEQ ID NO:2;

b) amino acid residue 31 to amino acid residue 63 of SEQ ID NO:2;

c) amino acid residue 30 to amino acid residue 64 of SEQ ID NO:2;

d) amino acid residue 31 to amino acid residue 64 of SEQ ID NO:2; and

e) ~~a polypeptide chosen from SEQ ID NOs:14-72~~amino acid residue 23 to amino acid residue 67 of SEQ ID NO:10.

Claim 5 (currently amended): A pharmaceutical composition comprising a polypeptide selected from the group consisting of:

a) a protein according to claim 1;

b) amino acid residue 30 to amino acid residue 63 of SEQ ID NO:2;

c) amino acid residue 31 to amino acid residue 63 of SEQ ID NO:2;

d) amino acid residue 30 to amino acid residue 64 of SEQ ID NO:2;

e) amino acid residue 31 to amino acid residue 64 of SEQ ID NO:2; and

f) ~~a polypeptide chosen from SEQ ID NOs:14-72~~amino acid residue 23 to amino acid residue 67 of SEQ ID NO:10;

in combination with a pharmaceutically acceptable vehicle.

Claims 6-20 (canceled)

Claim 21 (currently amended): A method of treating a microbial-related disease in a mammal comprising administering to ~~a~~the mammal a therapeutically effective amount of a polypeptide selected from the group consisting of:

a) ~~a polypeptide~~amino acid residue 1 to amino acid residue 65 of SEQ ID NO:2;

b) ~~a polypeptide~~amino acid residue 23 to amino acid residue 67 of SEQ ID NO:10;

c) ~~a polypeptide chosen from SEQ ID NOs:14-72~~amino acid residue 1 to amino acid residue 67 of SEQ ID NO:10;

d) amino acid residue 30 to amino acid residue 63 of SEQ ID NO:2;

e) amino acid residue 31 to amino acid residue 63 of SEQ ID NO:2;

f) amino acid residue 30 to amino acid residue 64 of SEQ ID NO:2;

g) amino acid residue 31 to amino acid residue 64 of SEQ ID NO:2;

h) amino acid residue 20 to amino acid residue 67 of SEQ ID NO:10 and

i) amino acid residue 22 to amino acid residue 67 of SEQ ID NO:10;

~~whereby~~wherein said polypeptide ameliorates said disease.

Claim 22 (currently amended): ~~A~~The method of claim 21~~,~~ wherein said microbial-related disease is associated with the eye.

Claim 23 (currently amended): ~~A~~The method of claim 22~~,~~ wherein said microbial-related disease is conjunctivitis.

Claim 24 (currently amended): ~~A~~The method of claim 21~~,~~ wherein said microbial-related disease is associated with the ear.

Claim 25 (currently amended): A method of contraception in a mammal comprising administering to ~~a~~the mammal a therapeutically effective amount of a polypeptide selected from the group consisting of:

a) ~~a polypeptide~~amino acid residue 1 to amino acid residue 67 of ~~SEQ ID NO:2~~SEQ ID NO:10;

b) ~~a polypeptide~~amino acid residue 21 to amino acid residue 67 of SEQ ID NO:10;

c) ~~a polypeptide chosen from SEQ ID NOs:14-72~~amino acid residue 23 to amino acid residue 67 of SEQ ID NO:10;

d) amino acid residue 30 to amino acid residue 63 of SEQ ID NO:2;

e) amino acid residue 31 to amino acid residue 63 of SEQ ID NO:2;

f) amino acid residue 30 to amino acid residue 64 of SEQ ID NO:2;

g) amino acid residue 31 to amino acid residue 64 of SEQ ID NO:2;

h) amino acid residue 20 to amino acid residue 67 of SEQ ID NO:10; and

i) amino acid residue 22 to amino acid residue 67 of SEQ ID NO:10.

Claim 26 (currently amended): A method for reducing the risk of or treating a respiratory system infection by a ~~pathogen~~microbe in a mammal comprising:

administering to the mammal a therapeutically effective amount of a composition ~~to inhibit the pathogenic infection~~, wherein the composition comprises:

a polypeptide ~~demonstrating pathogen-destroying activity wherein the polypeptide comprises at least a portion of SEQ ID NO:2 or~~ comprising amino acid residues 23 to 67 of SEQ ID NO:10; and

a pharmaceutically acceptable carrier.

Claim 27 (canceled)

Claim 28 (currently amended): The method of claim ~~27~~26 wherein the respiratory system infection is associated with cystic fibrosis.

Claim 29 (currently amended): The method of claim 26 wherein the ~~pathogen~~microbe is selected from the group consisting of Burkholderia cepacia, Pseudomonas aeruginosa, Stenotrophomonas maltophilia, Staphylococcus aureus,

Haemophilus influenzae, Aspergillus fumigatus, Candida albicans, mycobacteria, Mycoplasma, Escherichia coli, Klebsiella, and combinations thereof.

Claims 30-36 (canceled)

Claim 37 (original): The method of claim 26 wherein the composition is formulated for topical, inhalant, or parenteral administration.

Claim 38 (currently amended): A method for reducing the risk of or treating a respiratory system infection by a ~~pathogen~~microbe in a mammal comprising:

administering to the mammal a therapeutically effective amount of a composition ~~to inhibit the pathogenic infection~~, wherein the composition comprises:

a polypeptide ~~demonstrating pathogen-destroying activity wherein the polypeptide comprises a polypeptide~~comprising an amino acid sequence that is at least ~~80%~~95% identical to ~~SEQ ID NO:2 or~~amino acid residues 23 to 67 of SEQ ID NO:10; and

a pharmaceutically acceptable carrier; and

wherein the polypeptides exhibits antimicrobial activity.

Claim 39 (canceled)

Claim 40 (currently amended): The method of claim ~~39~~38 wherein the respiratory system infection is associated with cystic fibrosis.

Claim 41 (currently amended): The method of claim 38 wherein the ~~pathogen~~microbe is selected from the group consisting of Burkholderia cepacia, Pseudomonas aeruginosa, Stenotrophomonas maltophilia, Staphylococcus aureus, Haemophilus influenzae, Aspergillus fumigatus, Candida albicans, mycobacteria, Mycoplasma, Escherichia coli, Klebsiella, and combinations thereof.

Claim 42 (currently amended): The method of claim 38 wherein the ~~composition comprises a~~ polypeptide ~~selected from the group consisting of SEQ ID NO:2,~~

~~SEQ ID NO:10, and combinations thereof~~comprises amino acid residues 23 to 67 of SEQ ID NO:10.

Claim 43 (original): The method of claim 38 wherein the composition is formulated for topical, inhalant, or parenteral administration.

Claim 44 (new): The isolated protein of claim 1 wherein the polypeptide has cysteine residues corresponding to amino acid residues 33, 40, 45, 55, 62, and 63 of SEQ ID NO:10.

Claim 45 (new): The isolated protein of claim 1 wherein the polypeptide comprises amino acid residues 21 to 67 of SEQ ID NO:10.

Claim 46 (new): The isolated protein of claim 1 wherein the polypeptide comprises amino acid residues 1 to 67 of SEQ ID NO:10.

Claim 47 (new): The isolated protein of claim 1 wherein the microbe comprises at least one microbe selected from the group consisting of a bacteria, an anaerobic organism, a protozoan, a fungus, and a virus.

Claim 48 (new): The isolated protein of claim 47 wherein the bacteria is gram negative.

Claim 49 (new): The isolated protein of claim 47 wherein the bacteria is gram positive.

Claim 50 (new): An isolated polypeptide comprising amino acid residues 23 to 67 of SEQ ID NO:10.